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Exchange of comments on negative VST responses

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To the editor:

The May article by Golden et al breaks new ground for the many allergists who have considered the finding of negative venom skin test (VST) results to be the completion of the evaluation of a patient with a history of an insect sting-induced systemic reaction. In a way, it is simply another myth debunked—and, ironically, in the opposite direction. Whereas it was once assumed that stings in history-positive/VST-positive patients would cause reactions 100% of the time and that these reactions would worsen in severity with every sting and studies have instead shown a 25% to 50% recurrence rate with the same or lesser severity of reaction,^{[1](#) [2](#)} we now learn that the assumption that history-positive but VST-negative patients would have a 0% chance of reacting to a sting is also false. In fact, their recurrence rate of 22% was similar to that of the history-positive/VST-positive patients in this study and near the range of that reported previously by multiple researchers. The risk appears smaller in those history-positive/VST-negative patients who also have a negative RAST (14%) in comparison with those with a positive RAST (24%), but the numbers of patients in the first group were too small for this to be statistically significant. A disappointment of the article is that only 14 (25%) of 56 of VST-negative/RAST-negative patients had challenge stings in comparison with 37 (86%) of 43 and 141 (72%) of 196 for the VST-negative/RAST-positive and VST-positive groups, respectively.

Some questions occur as one reads the article:

1. Did any of the history-positive/VST-negative/RAST-negative patients have a history of the most severe “near-fatal” reactions and hence not meet the protocol for sting challenge?
2. How many of the 7 patients with negative VST but positive RAST in the 4 to 243 ng/mL range were stung? Was their reaction rate different from that of the patients with lower positive RAST (1 to 3 ng/mL)?
3. We are told that of the 11 VST-negative/RAST-negative patients, 6 had histories of mild, 4 of moderate, and 1 of severe reactions. When challenge-stung in the study, they developed 7 mild reactions and 4 moderate reactions. Did any patient develop a reaction of *greater* severity over time?
4. There is a reference in the abstract to 36 patients with negative VST who had low positive venom RAST or whose repeat VST results were positive. These 36 patients were among the 43 patients in the VST-negative/RAST-positive group. This seems inconsistent with the statement made in the midportion of the Discussion section that if patients with screening-negative VST displayed positive VST on the day of the sting challenge, they were counted as skin test–positive.

The authors point out that they are not claiming that the Hopkins RAST is more sensitive than VST; in fact, the venom RAST was negative in 20% of the history-positive/VST-positive patients. Rather, they are recommending that VST be used as the initial diagnostic test and that if it is negative, the patient be evaluated by RAST and repeat VST after 3 to 6 months. They write, “Even when all tests are negative, it is not possible to fully exclude the risk of a systemic reaction to a future sting.” These patients should avoid stings and be ready to treat reactions (with antihistamines, epinephrine self-injecting devices, etc) if they occur. But where does it end? What does a *low chance of reaction* mean, and what management is suggested for such patients? In this study, 2 (14%) of 14 history-positive/VST-negative/RAST-negative patients reacted to stings. Even if all 56 patients in this category had undergone sting challenge and no additional patients had reacted, the reaction rate would have been 4% (2 of 56). This is in the range of systemic reaction risk for patients with histories of large local reactions (2% to 14%).^{3 4} This finding challenges long-held assumptions. Apparently, there are no zero-risk situations.

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[MEDLINE](#)

[ABSTRACT](#)

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[MEDLINE](#)

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